

December 29, 1964

Dr. Christopher R. Evans  
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Teddington, England

Dear Dr. Evans:

I might have been chagrined to see your neat little note with Newman on "dreaming" in the New Scientist for November 26 had it come to my attention a week hence, for I was just on the point of writing a brief essay on precisely the same theme. And guess what, intended for the New Scientist!

You may be aware that besides Dr. Dement, Professor John McCarthy is also on this campus; when McCarthy introduced me to LISP 1.5 the analogy of the garbage-collection routine in that system to dreaming was a compelling one. Dement and I had a luncheon discussion about this a couple of months ago, and he did concede that this was at least as plausible an interpretation of the necessity for dreaming as the chemical cleanout idea he has been chasing. (At some level, these are not necessarily inconsistent.)

The whole process of normal perception involves a list-search and timely restructuring. This suggests that some psychiatric disorders may be directly related to defects in dreaming. Infantile autism is a not unreasonable candidate for such a condition; perhaps others need a fresh look along the lines of your proposal.

Dement thinks this is a fairly venerable idea, but if so it is hardly given the attention it should receive now with the force of the program analogy.

What I find uncanny, and perhaps the real reason for my writing this letter, is not the popping up of the same idea (which is far more a rule than exception these days), but the extent to which even your metaphors anticipated what I would have written myself. Are we re-echoing something that we have all read? Or should it be a surprise that working on computers conditions us to think in a common algorithm?

Sincerely yours,

Joshua Lederberg  
Professor of Genetics

[cc: Francis Crick 7/5/84]

C. R. Evans